



# NWCG Smoke Committee

## January 2015 Activity Update

### Teleconference with Fuels Committee (Jon Wallace) - Proposed National Fire Danger Rating System (NFDRS) changes for wildfire, wildland smoke, emissions and prescribed fire—1/30/2015

- Making sure Fuels Committee and SmoC on same page regarding the proposed NFDRS changes.
- New Growing Season Index—24 hrs weather data vs. single daily measurement currently used.
  - SmoC Question GSI based on weather station observations?
    - Reply, yes, this will be by station value, not satellite imagery, though the two are very similar in their results.
  - SmoC Question: Will the GSI help set green dates? Don't understand how it will be applied, would like more information.
    - Reply— Yes it will set green dates. Matt Jolly and Larry Bradshaw are currently working on the technical document for this, which will include case examples in four corners of the country. Goal—have a draft version released in a few weeks.
  - SmoC Question: How is an outage handled w/the new dependence on weather station?
    - Reply: Handled like it is now, no unit = no information. Under the new system, recovery time to capture fuel moisture values will be faster, nearly immediately.
- Nelson dead fuel moisture model – responds better to rainfall.
- Consolidation of 4 fuel models.
  - SmoC Question on the slide showing correlation of the fuel models and combining them into 4 categories: The correlations are high, but are they relevant, does correlation really indicate sameness?
    - Reply: When the values are plotted they lay right over each other, or very close, so these correlations are relevant.
  - SmoC Comment: The absolute values are different.
    - Reply: These values are applied to a percent, and do not correspond to the application within the NFDRS.
  - SmoC Comment: Hanes 1986 cited that most of the fuel models needed improvement
  - SmoC Question on application in the northwest – it looked like one side of the Cascades would be deemed one model, east side of the cascades would be another. With these 4 models, will the ability to use more than 1 model through WIMS?
    - Reply: Yes, WIMS will offer all 4 models for every station.

### Presentation on effects of NFDRS changes to applications outside wildfire pre-planning, suppression response and preventions – Presenter Gary Curcio.

- Recommends a task group be assembled, though the upcoming technical document may answer several concerns, just depends on what information is within it.
- Case example in NC: Escaped Rx fires occurring when no one was checking NFDRS numbers.
- If NFDRS had been consulted, it would have provided status of fuels – applicable to Rx fire, fuels, smoke and emissions mgt.
  - An evaluation of fuel moistures will indicate whether or not large fuels will ignite, and energy release numbers can be applied to spotting, and spread can be used to determine how fast a tractor operator would need to create line. These are determined by interpreting the NFDRS values to unit values on moisture, chains/hour, etc.
  - In NC they use fuel model B,D, F, and O. Based on climate influence B and F wouldn't be of concern in the case Gary outline here, but O and D do cause concern for energy



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release, so your use of F, D, B, or O will influence your conclusion when making local interpretations based on NFDRS.

- NFDRS fuel moisture inputs are key, those were put in FEPS and smoke plume was predicted with an impact of 'moderate', which was within the acceptable ranges. Allowed for burning on what would otherwise be seen as a no-burn day.
- Looked at what opportunities they could utilize to burn more, but with fewer escaped fires.
- Several NFDRS principles will be impacted and will require rewriting - NFDRS philosophy has changes and customer based in being selectively shaped. Specific impacts are to the :
  - Concept of containment as it pertains to behavior potential of the head fire.
  - Fire behavior outputs being physically and meaningfully interpretable.
  - Meaning of low spatial resolution to the area to be rated with the system.
  - NFDRS is being used for more than just wildfire danger. Simplifying the fuel model will remove the NFDRS effectiveness being applied to RX fire burning.

## Outreach and Messaging

- Status of Activity Updates – May 2014 is complete. Diana is working on June's activity update.
- Web Site activity – Mike and Josh continue to work on the website.

## NWCG Business

- Funding Opportunities - deadline for submittal requests is Monday, April 27.
  - Elaine sent out 2016 budget guidance – Be specific regarding needs on the request. The form is the same as previous years. IT requests are no longer part of the NWCG budget.
- Glossary – 12 terms to review. Responses due Monday, Feb 9. Definition of wildfire is the only one that affects SmoC from Mike's review of the proposed changes.
  - – No Concerns were voiced, SmoC agrees with the proposed changes.
- NWCG Memo # 14-021: Release of the draft October 2015 Wildland Fire Qualification System Guide (PMS 310-1) for review and comment. Comments due by Friday, May 8.
- Fire Danger subcommittee will respond to the fire danger pocket card assessment from the Desert Research Institute (DRI has proposed changes).
- NFDRS changes are posted on the web (presentation reporting background from John Wallace). Board has already accepted previous comments. May still be able to comment.
  - If previous comments concern wildfire only there won't be impact on Rx burners and smoke managers.
  - NFDRS originally developed for wildfire. If plans to use for Rx fire and emissions, need to make sure specific needs of Rx and emissions are considered.
  - Hold a joint call w/SmoC and Fuels Committee and include members from FMC.
    - Include John's presentation and feedback plus a Gary's concerns w/NFDRS & its application in order to clearly discuss what committee has already done w/NFDRS.
    - Need to select member to attend all 3 days of February NWCG Board Meeting.
  - Gary can share the status of FDSC & ESP –& Ground Fuels.

## Ozone and Fire-SmoC BP & RX Fire Councils

- Pete is working with RX Fire Council Coalition on Ozone revision fact sheet.
- Pete will send Tami an email to see if the Association of Air Pollution Control Agencies (AAPCA) has perspective to share regarding the new ozone standards?



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### Emissions and factors – Susan O’Neill

- Shawn Urbanski is working to get new EF in FOFEM. Roger WILL make Consume’s new EFS consistent with FOFEM. Consume is in Bluesky, which uses the FEPS model to get emissions.
- Susan is doing analysis to see what changes we could see with these new EFs.
  - Susan Reprocessed 2014 Bluesky emissions with the new EFs. PM 2.5 could increase 1.5 – 2 times. Other species: decrease in ammonia. CO<sub>2</sub>/CO/CH<sub>4</sub> don’t change too much.
  - FEPS had substantial VOC EFs already, so these have not changed w/new FEPS, but Consume and FETS are likely to experience a substantial change.
  - Such efforts will be pulled into future NEIs .
  - Shawn is available in March to do a presentation to SmoC, Susan can do a presentation before March for us.

### Redbook release - [http://www.nifc.gov/policies/pol\\_ref\\_redbook.html](http://www.nifc.gov/policies/pol_ref_redbook.html)

- Claudia will check to see where, and to what degree, smoke is covered.

**Mixing Height calculation revisions report** - Dan Chan, Mark Fitch, Mike Broughton, Nick Yonker, and Gary Achtmier have been listed as folks that could serve as potential reviewers before publication. Wildfire, wildland smoke, emissions and prescribed fire are the changes being considered.

### Status of NEI database

- April is the deadline for the first data submittal for the 2014 NEI.

**Status of FOFEM to better capture ground fuel consumption** - will BlueSky be able to incorporate these changes this season?

### Subcommittee Report-outs:

#### Smoke Technical Topics

- Work is continuing on the smoke management guide. Susan covered the EFs. Draft should be ready in the next month or so.

#### Smoke Training

- Call to continue revising the Smoke Exposure Guidebook at the end of the month.

#### Smoke Managers

- End of the month call should include presentation from Ron Sherron.

### Other topics:

- Emissions and factors – Shawn Urbanski will be giving a webinar to talk about the emission factors on March 12<sup>th</sup>.
- Redbook release - [http://www.nifc.gov/policies/pol\\_ref\\_redbook.html](http://www.nifc.gov/policies/pol_ref_redbook.html) - The Redbook group will be under the fire directors, so no longer NWCG. Paul Schlobom is the liaison for FMB to NWCG.

### Round Robin Topics

FENC in person meeting March 10 – 12.